

Message Text

CONFIDENTIAL

PAGE 01 STATE 135614

63

ORIGIN EB-07

INFO OCT-01 CIAE-00 COME-00 DODE-00 NSAE-00 TRSE-00 EUR-12

ERDA-05 ISO-00 MC-02 ACDA-05 /032 R

DRAFTED BY EB/ITP/EWT:JMGREGORY:ERS
APPROVED BY EB/ITP/EWT:JMGREGORY, JR.
COMMERCE-RDIXON
DEFENSE/OSD-DSCHROEDER
RPE

----- 123523

P 110000Z JUN 75

FM SECSTATE WASHDC

TO USMISSION OECD PARIS PRIORITY

C O N F I D E N T I A L STATE 135614

EXCON

E.O. 11652:XGDS-1

TAGS: ESTC, COCOM

SUBJECT: COCOM LIST REVIEW: IL 1564 - INTEGRATED
CIRCUTS

REFS: A) COCOM DOC REV (74)1564/5
B) OECD PARIS 13805
C) STATE 120542

1) CORRECTIONS AND COMMENTS REQUESTED REF B ARE AS
FOLLOWS:

A) DRAFTING CORRECTION IS NECESSARY IN THE HEADING TO II(C)
WHICH DOES NOT PROPERLY CARRY OVER THE SENSE OF THE PRESENT
NOTE 2(B).

B) THE US POSITION ON (C)(I) MUST BE CHANGED TO ONE OF
RESERVE BECAUSE US AUTHORITIES REFUSE IT AS PRESENTLY
CONSTITUTED. THE "LOGIC FAMILY" APPROACH IS REASONABLE
BUT THE FIRST REQUIREMENT FOR DEALING WITH IT IS METHODOLOGY
CONFIDENTIAL

CONFIDENTIAL

PAGE 02 STATE 135614

WHICH HAS NOT BEEN RESOLVED. THE USG IS CONCERNED WITH

SOME IC'S WHICH ARE WITHIN LOGIC FAMILIES. THEREFORE, IT WOULD BE SELF-DEFEATING TO AGREE TO THE DELETION OF THE 16 PIN PARAMETER UNTIL THE RECOMMENDATIONS OF THE TECHNICAL WORKING GROUP HAVE BEEN SATISFACTORILY INCORPORATED IN THE TEXT. MICROPROCESSORS, RAM'S, ROM'S AND SHIFT REGISTERS WHICH ARE OF GREAT CONCERN ARE AFFECTED HERE. MOREOVER, US AUTHORITIES NOTE THAT MOS HAS BEEN DROPPED FROM THE LOGIC FAMILY CONCEPT THEREBY RELEASING CMOS WHICH THE US REGARDS AS DESIRABLE FOR COVERAGE. FOR OTHER MOS DEVICES, THERE ARE NEITHER LOGIC "FAMILIES" OR "STANDARD" GATES. THEREFORE THE SPEED POWER PRODUCT EXPRESSED AS 70 PICOJOULES PER GATE IS NOT CALCULABLE.

C) THE US POSITION ON (C)(VIII) MUST BE CONVERTED TO ONE OF RESERVE BECAUSE US AUTHORITIES ARE CONCERNED (BEFORE FURTHER STUDY CAN BE COMPLETED) THAT THE BLANKET EXCLUSION OF THE KIND ENVISAGED RUNS THE RISK OF DEFALTING ON COVERAGE OF VERY SOPHISTICATED GENERAL PURPOSE DEVICES WHICH MAY NOT BE LIMITED TO THE UNOBJECTIONABLE CIVIL EQUIPMENT IT PROPOSES TO BENEFIT.

D) THE US POSITION ON NEW NOTE 3(B) AND (C) MUST BE CHANGED TO ONE OF RESERVE FOR FURTHER CONSIDERATION BECAUSE THEY WISH TO REVIEW THE TEMPERATURE PARAMETERS CAREFULLY AND SEE THAT THE SENSITIVE EFFECTS, OR RATHER THE POTENTIALLY SENSITIVE EFFECTS OF (C) CAN BE REVIEWED.

2. APART FROM THE ABOVE SPECIFIC CHANGES AND CORRECTIONS, US AUTHORITIES WILL BE CONSIDERING THE FOLLOWING POINTS AS THEY CONDUCT THE EXTENSIVE STUDY WHICH THEY BELIEVE IS INDISPENSIBLE BEFORE REDEFINITION OF IL 1564 CAN BE FINALLY AGREED: (DEL MAY DRAW ON FOLLOWING WITHOUT QUOTING) DIGITAL CIRCUITS WERE NOT DISCUSSED EXTENSIVELY IN THE FIRST ROUND AND THE TWG REPORT DOES NOT APPEAR TO REFLECT A NUMBER OF VITAL POINTS WHICH WERE CONSIDERED AND WOULD BE AN ESSENTIAL PART OF ANY AGREEMENT FOR CHANGING THE EXISTING EXCEPTION CLAUSE FOR DIGITAL CIRCUITS. US EXPERTS BELIEVE THAT THE UK PROPOSAL HAS MERIT BUT HAVE NOT HAD TIME TO PURSUE IT IN TERMS OF IDENTIFYING ADMINISTRATIVELY DIFFICULT TECHNICAL FORMULATIONS, CORRECTING THEM AND COVERING SIGNIFICANT POTENTIAL GAPS IN AREAS OF CRITICAL STRATEGIC CONCERN. THE US DELEGATION BELIEVES THAT THE BASIC SHIFT TOWARD

CONFIDENTIAL

PAGE 03 STATE 135614

PROVIDING FOR RELEASE OF DIGITAL SEMICONDUCTORS BY "FAMILY" CAN BE A USEFUL STEP FORWARD BECAUSE THE PRESENT PROPAGATION DELAY RESTRICTION IMPACTS MOST HEAVILY ON SIMPLE GATES WHILE MORE COMPLEX LOGIC ELEMENTS ARE LESS LIKELY TO BE COVERED EXCEPT WHEN THEIR COMPLEXITY LEADS TO A DEVICE WITH MORE THAN SIXTEEN PINS. UNFORTUNATELY, AS INDICATED ABOVE THE FIRST ESSENTIAL STEP WAS OMITTED. BEFORE GOING ANY FURTHER, IT WILL BE NECESSARY TO DECIDE HOW A TYPICAL SPEED

POWER PRODUCT PER GATE IS OBTAINABLE FROM INFORMATION ON PRESENT DATA SHEETS. WITHOUT AN EXPLICIT FORMULATION IT IS NOT POSSIBLE TO JUDGE WHETHER THE UK INDICATION THAT COMPUTATION IS SIMPLE IS A CORRECT ONE. SIMILARLY, DEFINITION OF A LOGIC FAMILY IS NECESSARY BEFORE WE CAN PROCEED FURTHER. THE TWG DID NOT RESOLVE THIS LATTER QUESTION. SECONDLY, ALTHOUGH THERE WAS AGREEMENT BY THE TWG THAT THE

THAT THE CHANGE IN THE FORMULATION WAS LIMITED TO LOGIC GATE CIRCUIT AND DID NOT INCLUDE MEMORY CIRCUITS, THAT AGREEMENT IS NOT REFLECTED EITHER IN THE TWG REPORT OR THE PROPOSED REVISION. US AUTHORITIES BELIEVE THAT 1564 SHOULD NOT UNDERCUT 1565 COVERAGE OR THAT IN OTHER AREAS, THEREFORE EXPLICIT INCORPORATION OF THE FOREGOING AGREEMENT IS AN ESSENTIAL PREREQUISITE TO REVISION. WE ALSO NOTED THAT THE PUBLISHED REPORT DOES NOT REFLECT THE GREAT CONCERN WE HAVE FOR CONTINUED COVERAGE OF MICROPROCESSORS.

THIRDLY, SINCE THE SECOND ROUND US AUTHORITIES HAVE BEEN CONCERNED OVER THE ABSENCE OF COVERAGE FOR PROGRAMMABLE LOGIC ARRAYS OF THEIR POTENTIAL FOR 1565 EQUIPMENT. FOURTHLY, THE US DELEGATION IS SOMEWHAT MYSTIFIED BY THE PROPOSED DELETION OF MOS BECAUSE, WHILE WE AGREE CONCEPTUALLY THAT CIRCUIT PERFORMANCE RATHER THAN TECHNOLOGY SHOULD DETERMINE COVERAGE, THERE EXISTS ONLY ONE LOGIC FAMILY WHICH CONTAINS "TYPICAL GATES", VIZ. CMOS WHICH IS SIGNIFICANT BECAUSE OF ITS LOW POWER CONSUMPTION. WHILE WE FEEL IT WOULD NOT BE DELETED BY THE DELETION OF "MOS", IT ILLUSTRATES THE PROBLEM OF DEALING WITH MOS. IT IS DESIGNED TO OPERATE OVER A WIDE RANGE OF POWER SUPPLY VOLTAGES AND EACH OF THE VOLTAGES YIELD DIFFERENT SPEED POWER PRODUCTS. IN ADDITION, WHEN SPEED POWER PRODUCT ALSO VARIES WITH THE CLOCK RATE (AT WHICH STRIKE), MUCH AS WE WOULD HAVE HOPED FOR A FORMULATION WHICH WOULD HAVE PERMITTED EQUAL TREATMENT

CONFIDENTIAL

PAGE 04 STATE 135614

TREATMENT OF THE TWO TECHNOLOGIES, THE TECHNICAL REALITIES DO NOT ACCOMMODATE THE PROPOSED CHANGE. ANOTHER POINT WHICH MUST BE CONSIDERED IS THAT ONE OF THE MOST ATTRACTIVE FEATURES OF THE NON-STANDARD FAMILY MOS IS THAT IT PERMITS THE USE OF NON-STANDARD GATES. ONLY THE GATES IMMEDIATELY NEAR THE INPUT OR OUTPUTS NEED BE LARGE (ENOUGH STRIKE) AND INTERIOR LOGIC, MEMORY, ETC. CAN BE OF LOW POWER GATES. SUCH PROBLEMS INDICATE THAT ANY CONSIDERATION OF MOS CIRCUITS BE DEALT WITH IN TERMS SUITED FOR DESCRIBING THEIR FUNCTIONAL CAPABILITIES. LASTLY, OUR TECHNICAL REVIEW OF THE COVERAGE HAS ALSO RAISED A QUESTION AS TO THE STRUCTURE OF THE VARIOUS EXCLUSIONS NOTES. EXAMPLES OF THE NUMBER OF NEW TECHNOLOGIES WHICH ARE OF STRATEGIC SIGNIFICANCE AND WHICH SHOULD NOT BE EXCLUDED FROM COVERAGE ARE THOSE MADE WITH MEMORY CRYSTALLINE SILICON OR AN INSULATING SUBSTRATE

(OF WHICH SILICON OR SAPHIRE ARE BEST KNOWN EXAMPLES),
INTEGRATED INJECTION LOGIC CIRCUITS, CMOS, CCD AND A NUM-
BER OF OTHERS. (DEL WILL NOTE THAT 2. AMPLIFIES 1. ABOVE)

3. IN SUMMARY, REFORMULATION MUST INCLUDE, IN THE VIEW OF
US AUTHORITIES:

A) DEFINITION OF HOW TO COMPUTE SPEED POWER PRODUCT FOR A
TYPICAL GATE FROM EXISTING DATA SHEETS.

B) DEFINITION OF A LOGIS FAMILY WITH A LIMIT ON COMPLEX-

ITY AND DEVICES WHICH IMPINGE ON IL 1565.

C) DEFINITION OF MICROPROCESSOR CIRCUITS, THEIR SPECIFIC
COVERAGE, AND AN EXCLUSION FOR CALCULATOR CIRCUITS WHICH
WILL LOGICALLY BE A SUBSET OF ANY MICROPROCESSOR DEFINITION

D) THE DEFINITION OF SPEED POWER PRODUCT LIMITED TO AREAS
IN WHICH THE PARAMETER IS MEANINGFUL.

E) REVIEW OF SPECIFIC ITEMS IN THE DIGITAL MOS AREA TO
SEE IF SOME EXCEPTIONS CAN BE MADE. THE UK PROPOSAL
ON SHIFT REGISTERS, THOUGH NOT YET IN ACCEPTABLE FORM, IS
AN EXAMPLE OF HOW SPECIFIC EXCEPTIONS IN THE MOS AREA COULD
BE TREATED.

4. TRUST THAT DEL MAY APPRECIATE FROM THE ABOVE WHY IT IS
NECESSARY TO HAVE GONE AD REF ON ANY AGREEMENTS AND TO
OVERALL RESERVE ON THE ITEM PARTICULARLY WHERE NO INSTR-
UCTIONS HAD BEEN COMMITTED TO WRITING. DESPITE POOR TRACK
CONFIDENTIAL

CONFIDENTIAL

PAGE 05 STATE 135614

RECORD, WE ARE EVER OPTIMISTIC THAT THE TAC MAY PRODUCE
GUIDANCE IN TIME FOR DIGESTION BY OTHER DELEGATES BEFORE
ROUND "III B." KISSINGER

CONFIDENTIAL

NNN

Message Attributes

Automatic Decaptioning: X
Capture Date: 01 JAN 1994
Channel Indicators: n/a
Current Classification: UNCLASSIFIED
Concepts: ELECTRONIC EQUIPMENT, STRATEGIC TRADE CONTROLS, EXCEPTIONS LIST, IL 1564
Control Number: n/a
Copy: SINGLE
Draft Date: 11 JUN 1975
Decaption Date: 01 JAN 1960
Decaption Note:
Disposition Action: RELEASED
Disposition Approved on Date:
Disposition Authority: GarlanWA
Disposition Case Number: n/a
Disposition Comment: 25 YEAR REVIEW
Disposition Date: 28 MAY 2004
Disposition Event:
Disposition History: n/a
Disposition Reason:
Disposition Remarks:
Document Number: 1975STATE135614
Document Source: CORE
Document Unique ID: 00
Drafter: JMGREGORY:ERS
Enclosure: n/a
Executive Order: X1
Errors: N/A
Film Number: D750202-0880
From: STATE
Handling Restrictions: n/a
Image Path:
ISecure: 1
Legacy Key: link1975/newtext/t19750660/aaaaccxz.tel
Line Count: 204
Locator: TEXT ON-LINE, ON MICROFILM
Office: ORIGIN EB
Original Classification: CONFIDENTIAL
Original Handling Restrictions: n/a
Original Previous Classification: n/a
Original Previous Handling Restrictions: n/a
Page Count: 4
Previous Channel Indicators: n/a
Previous Classification: CONFIDENTIAL
Previous Handling Restrictions: n/a
Reference: 75 COCOM DOC REV (7564/5
Review Action: RELEASED, APPROVED
Review Authority: GarlanWA
Review Comment: n/a
Review Content Flags:
Review Date: 09 JUN 2003
Review Event:
Review Exemptions: n/a
Review History: WITHDRAWN <14 MAY 2003 by MartinML, 3.4.X9>; RELEASED <09 JUN 2003 by GarlanWA>; APPROVED <13 JUN 2003 by GarlanWA>
Review Markings:

Margaret P. Grafeld
Declassified/Released
US Department of State
EO Systematic Review
06 JUL 2006

Review Media Identifier:
Review Referrals: n/a
Review Release Date: n/a
Review Release Event: n/a
Review Transfer Date:
Review Withdrawn Fields: n/a
Secure: OPEN
Status: NATIVE
Subject: COCOM LIST REVIEW: IL 1564 - INTEGRATED CIRCUITS
TAGS: ESTC, COCOM
To: OECD PARIS
Type: TE
Markings: Margaret P. Grafeld Declassified/Released US Department of State EO Systematic Review 06 JUL 2006